Original Article

Role of Educational Intervention Regarding Liver Transplant Care on Nurse's Performance for Post-Liver Transplant

Sehrish Imtiaz, Adnan Yaqoob and Hajra Sawar

ABSTRACT

Objective: To determine the effect of liver transplant care on nurses' performance regarding care of patients and on complications among patients undergoing liver transplant.

Study Design: Quasi-experimental study

Place and Duration of Study: This study was conducted at the Pakistan Kidney & Liver Institute and Research Center and Bahria International Hospital Lahore from January, 2022 to June, 2022.

Materials and Methods: 86 nurses were enrolled. All diploma general and BSN nurses (both gender) aged 20 to 50 years, who were working in the liver transplant surgery department, having at least 1-year experience were enrolled in current study. The Intervention group was educated for 12 weeks through different learning and teaching methods like brain storming, lecture, discussion and handout. Educational workshops session was. Post assessment of both groups study participants were performed after the completion of Liver transplant care interventions. Performance questionnaire was a concern to assess nurses' practices regarding the post liver transplant care. The questionnaire has 20 questions. The statements are provided with yes (performed) and no (not performed) options.

Results: The mean age was 29.00±5.34 years in group A and 29.67±5.70 years in group B. In group A, there were 16 (37.2%) males and 27 (62.8%) were females, whereas in group B there were 7 (16.3%) nurses who were male and 36 (83.7%) were females. Most nurses were diploma holders [A= (67.4%) Vs. B= (46.5%)] and have up to 5 years of experience [A= (72.1%) Vs. B= (74.4)]. Nurses performances were assessed in both groups before and after intervention regarding practices of the post liver transplant care. The results revealed that, the mean ranks performance scores were significantly higher (p-value < 0.001) in control group (A) as compared to Intervention group (B) after the intervention. 3 (7.6%) nurses in group A had satisfactory performance level while in group B, 39 (90.7%) nurses had satisfactory performance level after intervention implemented on Group B as Group received no intervention (P-value <0.05).

Conclusion: The performance of nurses in terms of patient care improved after LT after implementation of intervention. Nurses are the important factor for educating patients which can lead to significant change in their behavior, management skills and quality of life as well.

Key Words: Liver transplant, Nurses performance, patient care, Educational guidelines

Citation of article: Imtiaz S, Yaqoob A, Sawar H. Role of Educational Intervention Regarding Liver Transplant Care on Nurse's Performance for Post-Liver Transplant. Med Forum 2022;33(11):85-88.

INTRODUCTION

Transplantation of the liver (LT) has become a frequent surgical technique all around the world. LT may be the best hope for patients with end-stage liver disease or acute liver failures who have not responded to conventional medical or surgical care, as well as those suffering from liver damage caused by hepatitis C infection.[1]

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Received: July, 2022
Accepted: August, 2022
Printed: November, 2022

Liver transplantation is a high-risk surgical technique used to treat individuals with irreversible liver damage. It is a topic of public health concern and social relevance. As a result, it is becoming increasingly necessary to build competence in this field in order to improve professional practice, particularly for nurses.[2] Moreover, Worldwide, roughly 350,000 deaths occur due to pathological hepatocellular complications caused by HCV. High fatality rate of HCV-infected individuals can be correlated to the fact that persistent and untreated HCV infections can lead to the development of hepatic cell carcinoma.[3] Adherence is difficult to maintain and is impacted by both patient- and treatment-related variables. Personal values and beliefs, personality characteristics, socioeconomic situation, general health, and degree of functioning are examples of patient-related factors. The number and dosage of medications, the occurrence of side effects, and the development of physical and cognitive symptoms as a

consequence of the treatment are all examples of treatment-related issues.[4,5]

The majority of chronic diseases now have a patient-centered care philosophy instead of one that is centered on the healthcare professional. Self-management is seen as a complement to adherence and a valuable component of patient treatment. It consists of tasks that chronically disease patients must complete in order to maintain their health and live the lives they desire.[6] The quality of nursing care is influenced by the level of knowledge, skills, values, and judgment of those participating in providing care for patients, and the nurses' cognitive to decide on a plan of action that depends on other factors as their educational level, experience, and training course in caring for those patients. Therefore, the quality of care that is given to the patients and patients' outcomes depend on the nurse.[7]

Nurse staffing could play a critical role in improving patient care and preventing problems. The quality of medical assistance makes a big difference in patient outcomes and safety. Appropriate talent, caring attitudes, efficient communication, economical structure and management systems, and successful involvement are all determinants of medical aid quality.[8] The nurse must remember that he or she is responsible for the quality of care provided to patients, as well as the establishment, ethics, laws, and skilled standards, as well as performance that contributes to the care analysis. The nurse is an important member of any team of health-care professionals involved in patient care.[8]the nurse, as a part of the multidisciplinary team, is critical to the transplant program's success and must keep their knowledge and skills up to date in this highly specialized and complex field. Nursing competence is defined as a set of knowledge and abilities that allow nurses to perform appropriately at all times.[9]

Nursing care necessitates the development of abilities in order to meet the physiological, pathological, and psychological demands of customers, families, and communities. Such interventional study will bridge the gap between health care teams and families. That is why there is a need to educate the nurses with advanced practices regarding the critical care of post liver transplant patients.[10]

The educational programme aims to empower nurses to enhance their knowledge and practices regarding liver transplantation care. Moreover, it also empowers patients by giving them more control over their care process and daily activities, thereby increasing their independence. Therefore, there was a need to better address liver transplant care on nurses' performance regarding care of patients to improve their quality of life and self-management skills.

MATERIALS AND METHODS

This quasi-experimental study was conducted at Liver transplant surgery unit, Pakistan Kidney and Liver Institute and Research Center and Bahria International Hospital Lahore. After taking the informed consent total 86 nurses were enrolled. All diploma general and BSN nurses (both gender) aged 20 to 50 years, who were working in the liver transplant surgery department, having at least 1-year experience were enrolled in current study. The Intervention group was educated for 12 weeks through different learning and teaching methods like brain storming, lecture, discussion and handout. Educational workshops session was. The workshop was conducted twice a week. Each session last for 45 minutes. The pre assessment scores of nurses' performances was observed and documented at both study settings. Then the liver transplant care intervention was delivered to the interventional group only and for the control group they were observed only and no intervention was performed. Post assessment of both groups study participants were performed after the completion of Liver transplant care interventions. Data was collected on a predesigned nurses performance questionnaire regarding post liver transplant care and socio demographic characteristics for nurses including age, gender, qualification, duty shift and work experience were noted. Performance questionnaire was a concern to assess nurses' practices regarding the post liver transplant care. The questionnaire has 20 questions. The statements are provided with yes (performed) and no (not performed) options. Each yes answer got a score one, while each no answer got score zero. The nurses who achieved score >60% on nurses' performance questionnaire was considered as satisfactory whereas score ≤60% was considered as unsatisfactory nurses' performance. Normality was assessed through Kolmogrov-Smirnov test. Comparison regarding performance of nurses was made through Mann Whitney U test. P-value <0.05 was considered statistically significant.

RESULTS

The mean age was 29.00±5.34years in group A and 29.67±5.70years in group B. In group A, there were 16 (37.2%) males and 27 (62.8%) were females, whereas in group B there were 7 (16.3%) nurses who were male and 36 (83.7%) were females. Most nurses were diploma holders [A= (67.4%) Vs B= (46.5%)] and have up to 5 years of experience [A= (72.1%) Vs. B= (74.4)]. Wilcoxon signed rank test was used to compare the pre and post mean change performance score in both groups. Results indicated that there was an insignificant change (P = 0.172) in performance score in group A (Control), pre and post mean ranks performance score was 9.69 and 10.67 respectively with p-value >0.05. Whereas, a significant change has been observed regarding performance scores in group B (p<0.001), mean ranks performance score in pre intervention was 21.98 and post intervention was 2.00 with p-value <0.05 (Tables 1-2).

Chi square test was used to determine the association of knowledge levels with groups. Results indicated that 3 (7.6%) nurses in group A had satisfactory performance level while in group B, 39 (90.7%) nurses had satisfactory performance level after intervention implemented on Group B as Group received no intervention. This difference was statistically significant (p<0.001) (Fig. 1).

Table No.1: Comparison of pre and post intervention performance scores in group A

Group A	Mean Rank	Z	P value
Pre Intervention	9.69	-1.365	0.172
Post Intervention	10.67		

Table No.2: Comparison of pre and post intervention performance scores in group B

Group B	Mean Rank	Z	P value
Pre Intervention	21.98	-5.631	<0.001
Post Intervention	2.00		

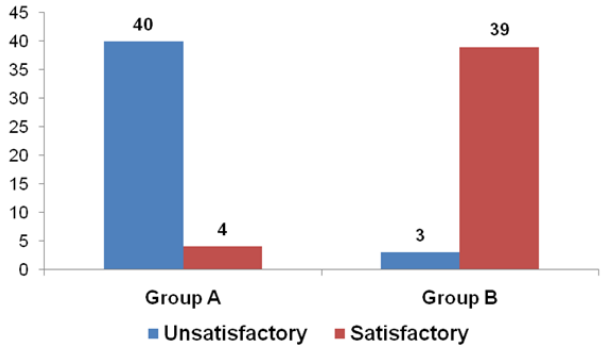

Figure No.1: Comparison of performance score among both groups

DISCUSSION

Liver transplantation (LT) has become a frequent surgical technique around the world. The primary goal of a Liver Transplant is to relieve limitations resulting from liver disease or failure. The level of knowledge, skills, values, and judgement of those providing care for patients has an impact on the quality of nursing care. Having the knowledge and abilities to always act in a professional manner is what is meant by competent nursing. This educational programme aim to empower nurses to enhance their knowledge and practices regarding liver transplantation care. Moreover, it also empowers patients by giving them more control over their care process and daily activities, thereby increasing their independence. Therefore, there was a need to better address liver transplant care on nurses' performance regarding care of patients to improve their quality of life and self-management skills.

Regarding the basic information of nurses, the present study that the mean age was 29.00±5.34 years in group A and 29.67±5.70 years in group B. In group A, there were 16 (37.2%) males and 27 (62.8%) were females, whereas in group B there were 7 (16.3%) nurses who were male and 36 (83.7%) were females. Most nurses were diploma holders [A= (67.4%) Vs. B= (46.5%)] and have up to 5 years of experience [A= (72.1%) Vs. B= (74.4)]. This finding is consistent with Seliman's findings that just 6% of the participants in his study received technical nursing institution diplomas, while 94% received secondary school nursing diplomas.[11]

Another study reported that the nurses working in anesthesia and ICU were more than 35 years is which is in contrast with our findings.[12] However, it has been considered that nursing is a feminine profession. The current study also reported that the female's nurses were majority in number among both groups. These findings were in consistent with the study which reported that the majority of nurses were females who work in ICUs.[13] It was also reported in another study that about 90% of nurses around the world were female. [13]In context to this the current study showed that the regarding performance of patient care after liver transplantation nurses have unsatisfactory practices. They have inadequate knowledge to perform post-operative care. But after the intervention the performance of nurses was significantly improved to satisfactory only in intervention group. Nurses performance was assessed in both groups before and after intervention regarding practices of the post liver transplant care. The results revealed that, the mean ranks performance scores were significantly higher (p<0.001) in control group (A) as compared to Intervention group (B) after the intervention. These findings can relate to a study conducted on nurses to find out the effect of educational program to improve knowledge after renal transplantation. The results showed that about 26.4% have poor knowledge before implementation of the program but after the intervention it was significantly increased. The study found that following the programme, there was a noticeable improvement in the knowledge and abilities of the nurses who work in the renal transplantation facilities. Hospital nurses must participate in frequent and scheduled training programs to keep up with current theories and procedures.[14]

A nurse knowledge questionnaire and an observational study were also used in a qusai experimental investigation. The study's findings revealed a statistically significant correlation between nurses' overall knowledge and skills regarding the assessment of liver graft function and post-transplant intensive care, indicating a beneficial relationship between knowledge and skills. It was also shown that, following intervention, nurses' comprehension and evaluation of liver transplant function in the ICU achieve a satisfactory level.[15] As a result of liver transplantation the present study's findings indicate that around majority of nurses' knowledge of medications has improved between pre- and post-educational programs. These similar to the study conducted Seham et al[16] findings that knowledge had improved following educational programs compared to knowledge before to educational programs. The findings of the current study indicate that the majority of nurses have poor

knowledge prior to educational programs compared to knowledge after programme implementation, and nurses score satisfactory practices. These similar to the study conducted by Mohamed[17] reported that the knowledge levels of nurses were unsatisfactory before to programme implementation and satisfactory post programme implementation, with a significant difference. However, this showed that the teaching session had a satisfactory positive effect on their prior knowledge of post-operative care. This finding is quite comparable to the London study's findings, which were intended to improve understanding and knowledge of the long-term care of patients receiving kidney transplantation.[18]

CONCLUSION

The performance of nurses in terms of patient care improved after LT after implementation of intervention. However, there was significant improvement in the post-operative care provided by nurses and complication rate was also reduced. Nurses are the important factor for educating patients which can lead to significant change in their behavior, management skills and quality of life as well.

Author's Contribution:

Concept & Design of Study:	Sehrish Imtiaz
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Conflict of Interest: The study has no conflict of interest to declare by any author.

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